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**General Information**

- **Product Comparison**
- Service Agreement
- Technology
- License Server
- System Requirements
- Incompatibilities with older versions

- [Full Comparison \(all features listed\)](#)
- [Short Comparison \(differences only\)](#)

Full Comparison (all features listed)

	Prime	Broadcast	Visualize	Studio
Platform				
Cross-platform support for Mac & Windows	x	x	x	x
64-bit Architecture	x	x	x	x
Outstanding Stability	x	x	x	x
OpenGL 3.0 Support (if supported by OS, driver and hardware)	x	x	x	x
Extensive API: C++, Python, C.O.F.F.E.E.	x	x	x	x

Interface & Workflow

Context-Sensitive, Fully-searchable HTML Help	x	x	x	x
Multiple projects open at once	x	x	x	x
Customizable Toolbars / Layouts / Menus	x	x	x	x
Light and dark Interface Schemes	x	x	x	x
Unlimited View Windows	x	x	x	x
Heads-up Display	x	x	x	x
Custom Popup Menu	x	x	x	x
Non-modal tools with realtime feedback	x	x	x	x
Collapsible Managers & Palettes	x	x	x	x
Selection / Display Filters	x	x	x	x
Custom User Data per Object	x	x	x	x
Doodle Viewport Annotation Tool	x	x	x	x
Layer system for object & material management	x	x	x	x
XRef external instancing / referencing system	x	x	x	x
Tablet Support for Wacom and other Pen Tablets	x	x	x	x
3dconnexion 3DMouse support	x	x	x	x

Data Exchange / Format Support

Quicktime Support	x	x	x	x
AVI Support	Win	Win	Win	Win
Image Formats - Float with Layers: PSD, TIFF	x	x	x	x
Image Formats - Float: HDR, DPX, RLA, RPF, OpenEXR	x	x	x	x
Image Formats: BMP, IFF, JPG, PICT, PNG, TARGA	x	x	x	x
Quicktime VR Object, Panorama	x	x	x	x
After Effects Compositing Exchange with 3D Data	x	x	x	x
Apple Motion Compositing Exchange with 3D Data	x	x	x	x
Apple Final Cut Pro Compositing Exchange	Mac	Mac	Mac	Mac
Combustion Compositing Exchange	x	x	x	x

	Win	Win	Win	Win
Digital Fusion Compositing Exchange				
Shake Compositing Exchange	x	x	x	x
Support of DXF, DWG, 3DS, DAE, FBX, DEM, LWS, SRL, VRML2, OBJ Formats	x	x	x	x
IGES importer			x	x
Okino Connection - seamless CAD file import via optional Polytrans software			x	x
BodyPaint 3D Exchange - 3ds max	x	x	x	x
BodyPaint 3D Exchange - Maya	x	x	x	x
BodyPaint 3D Exchange - Softimage	x	x	x	x
BodyPaint 3D Exchange - Lightwave	x	x	x	x

Modeling Tools				
Parametric Object Primitives	x	x	x	x
Parametric Spline Primitives	x	x	x	x
Extrude, Lathe, Loft, Sweep NURBS	x	x	x	x
Polygonal Modeling Tools with N-gon Support	x	x	x	x
HyperNURBs Subdivision Surfaces	x	x	x	x
Modeling Generators: Metaball, Boolean, Symmetry, Array, Atom Array, Instance, Connect	x	x	x	x
Deformers: Bend, Twist, Bulge, Shear, Taper, FFD, Formula, Wind, Explosion, Melt, Shatter, Wrap, Polygon Reduction, Spherify, Spline Rail, Spline Deformer	x	x	x	x
Displacement Deformer	x	x	x	x
Camera Deformer	x	x	x	x
Smoothing Deformer	x	x	x	x
Spline Wrap Deformer	x	x	x	x
Shrinkwrap Deformer	x	x	x	x

UV Editing				
UV Editor	x	x	x	x
Interactive UV Mapping by Projection Types	x	x	x	x
Optimal UV Mapping to automatically remove seams	x	x	x	x
LSCM Unwrapping and Relaxing	x	x	x	x
ABF Unwrapping and Relaxing	x	x	x	x

Materials & Texturing				
14 standard material channels: Color, Diffusion, Luminance, Transparency, Reflection, Environment, Fog, Bump, Normal, Alpha, Specular, Specular Color, Glow, Displacement	x	x	x	x
Transparency with absorption, total internal reflections, exit reflections	x	x	x	x
Blurry Reflections and Transparencies	x	x	x	x
Normal Maps: Tangent, Object or World	x	x	x	x
Displacement: Intensity (Centered), Red/Green and RGB	x	x	x	x
Choose Photoshop PSD layers per usage	x	x	x	x
Animated Textures (MOV, AVI, sequence) with viewport preview	x	x	x	x
Selectable viewport resolution and channel display per material	x	x	x	x

Shading Models: Phong, Blinn, Oren-Nayer	x	x	x	x
Fresnel Procedural Shader	x	x	x	x
Noise Procedural Shader with 32 different noise algorithms	x	x	x	x
Layer Shader	x	x	x	x
Proximity-based Proximal Shader	x	x	x	x
Procedural surface shaders	x	x	x	x
Texture Baking: surface color, illumination, ambient occlusion, normals, displacement and more	x	x	x	x
Sub-polygon Displacement			x	x
Sub-surface scattering			x	x
Enhanced Brick Shader	x	x	x	x
Pavement Shader	x	x	x	x
Sketch & Toon Art Shader			x	x
Sketch & Toon Hatch Shader			x	x
Sketch & Toon Spots (Halftone) Shader			x	x
3D Painting with layers, all blend modes and Photoshop file compatibility	x	x	x	x
Multibrush painting of multiple material channels in single stroke	x	x	x	x
Raybrush painting directly onto rendered result	x	x	x	x
Projection Painting	x	x	x	x
Exchange Projections with Photoshop	x	x	x	x
Camera mapping	x	x	x	x
ProjectionMan camera mapping workflow tool	x	x	x	x

Lighting				
Light Types: Omni, Spot, Infinite, Area, Square Spot, Parallel Spot, Square Parallel Spot	x	x	x	x
Hard, Soft, Area Shadows	x	x	x	x
Visible, Volumetric and Inverse Volumetric Lighting	x	x	x	x
Noise within light illumination or visibility	x	x	x	x
Include/Exclude Light diffusion, specular, shadow per object	x	x	x	x
Custom Lens Flares	x	x	x	x
Caustics			x	x
Colortemperature in Kelvin	x	x	x	x
Photometric brightness setting in Candela and Lumen	x	x	x	x
Support of IES Light data			x	x

Rendering				
Render up to 16,000 pixels square / 32 bits per pixel	x	x	x	x
Bucket rendering	x	x	x	x
Render Instances	x	x	x	x
Color Profile support	x	x	x	x
Camera White Balance	x	x	x	x
Linear Workflow	x	x	x	x
Adaptive Anti-aliasing	x	x	x	x

Multipass output	x	x	x	x
Object Buffers - specify unique alpha channels per object	x	x	x	x
Ambient Occlusion	x	x	x	x
Global Illumination (IR, QMC, Mixed)		x	x	x
Depth of Field Post Effect			x	x
Vector Motion Blur Post Effect			x	x
CineMan Renderman-compliant bridge			x	x
Sketch and Toon Non-photorealistic rendering			x	x
Pyrocluster Volumetric Particle Rendering			x	x
Physical Sky - realistic sky shading with 2D and 3D clouds, accurate sun and star positions, fog and atmosphere effects			x	x
3D Sound Rendering	x	x	x	x
Picture Viewer with RAM playback (including sound), history, AB Compare, histogram, layer view, color correction, full screen mode	x	x	x	x
Render Queue Batch Rendering System	x	x	x	x

Animation				
Easy one-click record button to keyframe Position, Scale, Rotation, Point Level animation and user-defined parameters	x	x	x	x
Record-dot animation of all animatable parameters	x	x	x	x
Automatic Keyframing	x	x	x	x
Cappucino - Realtime Keyframing				x
PowerSlider animation toolbar for playback and keyframe manipulation	x	x	x	x
Up to four timelines windows with customizable track display and dopesheet or F-Curve view modes	x	x	x	x
F-Curve Snapshots and Reduced Modification Curves	x	x	x	x
Constant Velocity option per track	x	x	x	x
Keyframe Reduction	x	x	x	x
Keyframe Baking	x	x	x	x
ASCII Animation Import	x	x	x	x
Non-linear animation / motion mixing system	x	x	x	x
Constraints: PSR, Up-Vector, Clamp, Mirror, Parent, Aim, Spring	x	x	x	x
Driver Tag				x
XPresso - node based expression editor	x	x	x	x
Virtual Walkthrough Tool - first-person scene navigation and animation			x	x

Dynamic Animation				
Basic Particle System	x	x	x	x
Thinking Particles node-based particle system				x
Rigid Body Dynamics (limited to MoGraph objects)		x		
Rigid Body Dynamics				x
Joints, Springs, Motors				x
Soft Body Dynamics				x
Cloth Dynamics & Dressing functions				x
Hair Dynamics				x



MoGraph Tools				
Cloner Object		x		x
Fracture Object		x		x
Matrix Object		x		x
Instance Object		x		x
Text Object		x		x
Tracer Object		x		x
Spline Mask Object		x		x
MoSpline parametric spline generator with L-system functionality		x		x
Effect Position, Scale, Rotation, Color, Time via Falloff, Shader, Random, Formula, Delay, COFFEE, Inheritance, Sound, Spline, Step, Target, Time or Volume		x		x
PolyFX polygon fracture deformer		x		x
MoGraph Selection Tag		x		x
Beat Shader		x		x
Multi-shader - affect texture based on clone color		x		x
Extrude Deformer		x		x

Character Animation Tools				
Joints with full dynamic IK	x	x	x	x
Skin Deformer supporting linear, spherical and blended deformation based on joints	x	x	x	x
Weighting manager and tools	x	x	x	x
PoseMorph morphing and hierarchical mixing system				x
Mirror tool	x	x	x	x
Naming Tool	x	x	x	x
Paint Tool	x	x	x	x
Weight Effector	x	x	x	x
VAMP tool for translating weights, morphs, selection, textures, Uvs and Vertex Maps between different geometry				x
Cluster Deformer	x	x	x	x
Morph Deformer				x
Jiggle Deformer	x	x	x	x
Tension Tag				x
Quaternion Tag				x
Point Cache Tag	x	x	x	x
Point Cache Deformer	x	x	x	x
Correction Deformer	x	x	x	x
Surface Deformer	x	x	x	x
Mesh Deformer	x	x	x	x
Squash & Stretch Deformer	x	x	x	x
Visual Selector				x



Hair Simulation and Rendering				
Guide-based Hair system				x
Hair Instancing				x
Feather Object				x
Fur System				x
Hair styling tools: Move, Scale, Rotate, Brush, Comb, Clump, Curl, Cut, Push, Straighten, Add Guides, Mirror, Set Roots				x
Hair Dynamics				x
Hair Shading System with multiple speculars, texture-defined root and tip colors, and variable transparency, thickness, length, scale, frizz, kink, density, clump, tighten, displace, bend, curl, twist, wave, straighten				x

Content				
Essential Presets and Demo Scenes	x	x	x	x
Advanced Presets and Demo Scenes				x
Broadcast Library incl. Materials, Cameras and Objects		x		x
Visualization Library incl. Materials, Presets and Architectural Objects			x	x